



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,143	09/20/2002	Kenji Okahara	218799USOPCT	8701

22850 7590 07/01/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
----------

WEINER, LAURA S

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/030,143

Applicant(s)

OKAHARA ET AL.

Examiner

Laura S Weiner

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 8-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

2. Claims 1-3, 6, 8-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected because the addition of the phrase "wherein it is an electrolyte for a non-aqueous secondary battery comprising a cathode...lithium" does not add a limitation to the claim because the claim is drawn to a non-aqueous electrolyte and not to a battery. An electrolyte does not comprise an anode and a cathode.

Claim 9 is rejected because the claim should state that the electrolyte not the cathode comprises the compound.

Claim 15 is rejected because the language "wherein X represents -O-, -S-, -CO- or -SO2-, Y represents a single bond, ...or -CO-" does not belong because the claim ends with "wherein X represents -O- and Y represents a single bond.

Claim 16 is rejected because the language "wherein X represents -O-, -S-, -CO- or -SO2-, Y represents a single bond, ...or -CO-" does not belong because the claim ends with "wherein X represents -CO- and Y represents a single bond, -CH2CH2- or -CH=CH-.

3. Claims 9-12, 13 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an electrolyte comprising a compound represented by Formula (I), does not reasonably provide enablement for a cathode comprising the compound represented by Formula (I). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The examples only discuss and show an electrolyte comprising a compound represented by Formula (I).

***Claim Rejections - 35 USC § 102***

4. Claims 1-3, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimitsu et al. (EP 0 296 589).

Yoshimitsu et al. teaches a nonaqueous electrochemical cell comprising an anode containing an alkali metal, a cathode collector and a cathode-electrolyte consisting of an ionically conductive solution of a solute in a solvent containing a liquid oxyhalide characterized in that at least one of the electrolyte and the collector is incorporated with an aromatic compound. Yoshimitsu et al. teaches on page 4, lines 1-33, that the aromatic compound are carbocyclic compounds having at least two benzene rings, oxygen or sulfur-containing compounds such as dibenzothiophene (see Example 2 on page 5), etc. Yoshimitsu et al. teaches on page 4, lines 36-40, that the aromatic compound is present in the electrolyte between about  $1 \times 10^{-6}$  and  $1 \times 10^{-2}$  mol/l.

5. Claims 1-2, 8, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al. (JP 62-86673, abstract).

Goto et al. teaches an electrolyte for a secondary lithium battery comprising Li salt and an organic compound having benzene ring and carbonyl group such as 9-Fluorenone, which increases the charge-discharge efficiencies and extends the battery cycle life.

6. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (JP 62-110257, abstract).

Suzuki et al. teaches a positive electrode or a negative electrode comprising an organic semiconductor obtained by reacting a nitrogen oxide on the condensed heterocyclic compound shown by Equation (2) or (3) where Y can be O, S or etc. and R1, R2 and R3 represent hydrogen atom, an alkyl group, etc.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Laura S. Weiner', is positioned above the printed name.

Laura S Weiner  
Primary Examiner  
Art Unit 1745

June 21, 2004